

In re Patent Application of:

FRISCO ET AL.

Serial No. 10/716,987

Filed: November 19, 2003 /

REMARKS

Applicants would like to thank the Examiner for the thorough examination of the present application. The arguments supporting patentability of the claims are provided below.

I. The Claimed Invention

The present invention, as recited in independent Claim 1, for example, is directed to an aircraft in-flight entertainment system comprising a satellite television (TV) receiver, and at least one passenger video display connected to the satellite TV receiver. A processor is connected to the satellite TV receiver for determining a component malfunction condition and for generating responsive thereto a substitute image on the at least one passenger video display rather than permit display of an undesired image which would otherwise be produced. The component malfunction is independent of a strength of a signal received at the satellite TV receiver.

The processor advantageously determines a component malfunction condition (independent of a strength of a signal received at the satellite TV receiver), and generates a substitute image in response thereto. Without the generated substitute image, the undesired image could be a degraded program image or a default text message image that may be disconcerting to the passenger. Consequently, the substitute image could be a text message that would tend to be helpful to the passenger in understanding that a loss of programming service has occurred, but without raising unnecessary concern for the proper operation of the aircraft to the passenger.

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Independent Claim 13 is similar to independent Claim 1, and recites that the processor determines a weak received signal strength condition and a component malfunction, with the component malfunction being independent of a strength of a signal received at the satellite TV receiver.

Independent method Claim 22 is similar to independent device Claim 13.

II. The Specification Supports Dependent Claims 8 and 9

The Examiner rejected dependent Claims 8 and 9 based on the position that the subject matter of these claims is not supported by the specification. Reference is directed to page 28, lines 24-32 of the specification, which provides:

"This concept of a soft failure mode, may also be carried forward or applied to a component malfunction, for example. As shown in the system 30' of FIG. 13, a component malfunction determining portion or circuit 177' is added to the processor 175' and can be used in combination with the weak received signal strength determining portion 176'. Of course, in other embodiments the malfunction determining circuit portion 177' could be used by itself." (Emphasis added).

The above reference thus provides support that the component malfunction can be independent of a strength of a signal received at the satellite TV receiver, as recited in independent Claim 1.

In terms of the specification supporting the subject

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matter of dependent Claims 8 and 9, reference is directed to page 28, lines 4-9 in the specification which provides that the substitute image may be generated for a single programming channel or for all programming channels. As discussed in the specification, the loss or weakness of one channel or all of the channels may be based on component malfunction as determined by the processor **175, 175'** illustrated in FIGS. 12 and 13.

For the processor to generate a substitute image for a single programming channel, the processor determines the undesired condition for that single programming channel. A single programming channel as used in the specification corresponds to an individual programming channel. Since the satellite TV receiver generates a plurality of single or individual video channels, the processor determines the undesired condition for each of the individual video channels. Accordingly, it is submitted that the subject matter of dependent Claim 8 is supported by the specification.

For the processor to generate a substitute image for a plurality of video channels, the processor determines the undesired condition for the plurality of video channels. The plurality of video channels corresponds to all programming channels as used in the specification. If the component malfunction within the satellite TV receiver is extensive enough, the substitute image "may be generated across the board for all programming channels" (page 28, lines 7-8). Accordingly, it is submitted that the subject matter of dependent Claim 9 is supported by the specification.

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III. The Claims Are Patentable

The Examiner rejected independent Claim 1 over the Sklar et al. patent in view of the Galipeau et al. patent. The Examiner also rejected independent Claims 13 and 22 over the Sklar et al. patent in view of the Galipeau et al. patent and in further view of the Gangitano patent.

The Examiner cited Sklar et al. as disclosing in FIGS. 1 and 2 an aircraft in-flight entertainment system **50** comprising a satellite television (TV) receiver **42**, at least one passenger video display **56** connected to the satellite TV receiver, and a processor **44** connected to the satellite TV receiver. The Examiner has taken the position that the processor **44** is used to determine an undesired condition and for generating responsive thereto a substitute image on the at least one passenger video display **56** rather than permit display of an undesired image which would otherwise be produced.

Sklar et al. discloses that the processor **44** (i.e., region control unit) instructs the receiver unit **42** (i.e., satellite TV receiver) to switch to a different program when the aircraft is soon going to leave the coverage area **26** of the first satellite **24**. Position, time and other related data is used to determine if an available program will finish before the aircraft leaves the current coverage area. The other related data includes signal strength of the received signal. The processor **44** may cause the passenger video display **56** to generate a graphic overlay message explaining to the passenger why that program is no longer available, and suggesting that the passenger try

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another channel. Such an overlay may state "Because Your Aircraft Will Be Leaving The Coverage Area Of DIRECTV-USA Within The Next 15 Minutes, 'Butch Cassidy & The Sundance Kid' Is Not Currently Available. Please Select Another Program" (column 11, lines 25-33).

As correctly noted by the Examiner, Sklar et al. fails to disclose that the undesired condition may be a component malfunction condition that is determined by the processor **44**. The Examiner cited Galipeau et al. as disclosing this feature of the claimed invention. More particularly, the Examiner characterized the in-flight workstation **200** illustrated in FIG. 9a of Galipeau et al. as performing the processor functions in the claimed invention. Column 11, lines 45-47 in Galipeau et al. discloses that another application of the workstation is as a maintenance terminal to help identify faulty components of the system for repair or replacement. The Examiner also stated that the workstation (i.e., processor) **200** is connected to a TV receiver (i.e., video module **152** as shown in FIG. 6b which is part of an integrated seat box **18**) via seat-to-seat cable **20**.

The Applicants submit that even if the references were selectively combined as suggested by the Examiner, the claimed invention is still not produced. The video modules **152** in each of the integrated seat boxes **18** are not television receivers. Instead, each video module **152** receives data from an IEEE-1394 data bus **22**. The data provided to the video modules **152** is generated by a video input device, such as a television receiver.

In addition, each video module **152** performs its own

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self-test to determine a component malfunction instead of the workstation **200** determining the component malfunction. Reference is directed to column 9, lines 38-41 of Galipeau et al., which provides:

"Video module BITE status information **156** is transmitted from the video module **152** to the head end via the data network interface module **114** to enable identification of defective modules." (Emphasis added).

The workstation **200** merely collects the BITE status information **156** from the video modules **152**. Galipeau et al. fails to teach or suggest that the workstation **200** may be used for determining a component malfunction of the video input device or television receiver providing the video to the video modules **152** within each integrated seat box **18**. In sharp contrast, independent Claim 1 recites that the processor is connected to the satellite TV receiver for determining a component malfunction condition and for generating responsive thereto a substitute image on the at least one passenger video display rather than permit display of an undesired image which would otherwise be produced, with the component malfunction being independent of a strength of a signal received at said satellite TV receiver.

The Examiner cited Gangitano as disclosing in FIGS. 4 and 5 a receiver **14** receiving a signal from a satellite, and determining for display **20** the signal strength (via signal strength detector **22**) of the received signal. Gangitano is directed to an apparatus for displaying the signal strength of a

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signal received at an antenna. The received signal is provided by a satellite, and the antenna is coupled to a terrestrial-based receiver that is typically located in a user's house. The Gangitano patent discloses that a low or no signal strength measurement may indicate component malfunction, such as a cable break between the receiver and the antenna.

The Examiner has taken the position that it would have been obvious to modify Sklar et al. in view of Galipeau et al. and in further view of Gangitano for the benefit of providing a more user-friendly notification of an indication of why a video image has suddenly frozen on the screen.

Even if the references were selectively combined as suggested by the Examiner, the claimed invention is still not produced. First, Gangitano does not provide the noted deficiencies of Galipeau et al. as discussed in detail above. Moreover, Gangitano fails to make any reference to an aircraft in-flight entertainment system as in the claimed invention. Instead, Gangitano is directed to a terrestrial based structure, such as a house, equipped with a satellite television receiver.

More particularly, Gangitano is directed to an apparatus for displaying the signal strength of a signal received at an antenna. The received signal is provided by a satellite, and the antenna is coupled to a terrestrial-based receiver that is typically located in a user's house. The Gangitano patent discloses that a low or no signal strength measurement may indicate component malfunction, such as a cable break between the receiver and the antenna. Gangitano fails to teach or suggest that the component malfunction may be within the terrestrial-

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based television receiver.

Accordingly, it is submitted that independent Claim 1 is patentable over the Sklar et al. patent in view of the Galipeau et al. patent. Independent Claims 13 and 22 are similar to independent Claim 1. Therefore, it is submitted that these claims are also patentable over the Sklar et al. patent in view of the Galipeau et al. patent and in further view of the Gangitano patent.

In view of the patentability of independent Claims 1, 13 and 22, it is submitted that the dependent claims, which include yet further distinguishing features of the invention are also patentable. These dependent claims need no further discussion herein.

IV. CONCLUSION

In view of the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

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